

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method of continuously producing polyalkylbiphenyls, comprising the steps of:

(1) supplying reaction raw materials containing at least biphenyl, dialkylbiphenyl and an olefin to a fixed-bed flow system reactor wherein the mol ratio of olefin/biphenyl is 0.3 to 3 at the inlet of the reactor and reacting the raw materials in the presence of a solid acid catalyst to obtain a reaction mixture containing monoalkylbiphenyls and dialkylbiphenyls;

(2) separating a fraction containing biphenyl and at least a part of monoalkylbiphenyls from said reaction mixture, wherein the concentration of dialkylbiphenyls in the fraction separated in said step (2) is made to be 15% by mass or less and the amount of dialkylbiphenyls in the fraction separated in said step (2) is made to be 30% by mass or less of the amount of dialkylbiphenyls produced in said step (1);

(3) circulating the fraction separated in said step (2) to said reactor such that the ratio by weight of biphenyl to monoalkylbiphenyls is designed to be 0.1 or more and is designed to be less than the solubility of biphenyl to monoalkylbiphenyl at a circulation temperature; and

(4) recovering polyalkylbiphenyls containing at least one of [[3,3-]] 3,3'-dialkylbiphenyl, 3,4'-dialkylbiphenyl, 4,4'-dialkylbiphenyl and 3,5'-dialkylbiphenyl from the reaction mixture through said step (2), whereby no precipitation of 4,4'-dialkylbiphenyl crystal is observed at -10°C.

2 - 4 (Canceled) .

5. (Currently amended) A method of continuously producing polyalkylbiphenyls according to claim 1 ~~[[4]]~~, wherein ~~the biphenyl raw material comprises a dialkylbiphenyl, and~~ the olefin has 2 to 6 carbon atoms.

6. (Currently amended) A method of continuously producing polyalkylbiphenyls according to claim 5, wherein the dialkylbiphenyl reaction raw material is a 3,3'-, ~~[[3,4-]]~~ 3,4'-, 4,4'- or 3,5-dialkylbiphenyl, the olefin is propylene, 1-butene, 2-butene or isobutene and the acid catalyst is silica alumina, and wherein the mol ratio of olefin/biphenyl is 0.5-1.5 at the inlet of the reactor.

7. (Canceled)

8. (Currently amended) A method of continuously producing polyalkylbiphenyls according to claim ~~[[7]]~~ 6, wherein the fraction separated in step 2 contains up to 10 mass percent of dialkylbiphenyl and is made to be up to 20 mass percent monoalkylbiphenyl or less of the amount of dialkylbiphenyls produced in said step (1).

9 – 12 (Canceled).